Pushing the Envelope			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
History of Aviation Propulsion (pgs. 5-9)	ND	MA.5.5.4.2	Measure and apply elapsed time; i.e., time zones, schedules, and calendars
Chemistry (pgs. 25-41)	ND	MA.5.5.4.5	Select and use appropriate units when measuring length, area, and volume
Physics and Math (pgs. 43-63)	ND	MA.5.5.1.12	Represent ratios and percents as parts of a whole using models and pictures
Physics and Math (pgs. 43-63)	ND	MA.5.5.5.4	Students identify a variable in an expression with no errors.
Pushing the Envelope			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Chemistry (pgs. 25-41)	ND	MA.6.6.4.4	Distinguish among perimeter, area, surface area, and volume
Chemistry (pgs. 25-41)	ND	MA.6.6.4.5	Select appropriate tools and units to determine the measurements needed for calculating perimeter, circumference, area, surface area, and volume
Physics and Math (pgs. 43-63)	ND	MA.6.6.1.1	Use a fraction to represent parts of a whole, division, or a ratio
Physics and Math (pgs. 43-63)	ND	MA.6.6.5.2	Use a variable to represent an unknown quantity
Pushing the Envelope			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Chemistry (pgs. 25-41)	ND	MA.7.7.4.3	Select the appropriate measure of perimeter, area, surface area, or volume to solve a problem
Chemistry (pgs. 25-41)	ND	MA.7.7.4.4	Select and use appropriate tools and units to determine the measurements needed for calculating perimeter, circumference, area, surface area, and volume
Physics and Math (pgs. 43-63)	ND	MA.7.7.1.1	Use ratios and proportions to represent relationships
Physics and Math (pgs. 43-63)	ND	MA.7.7.4.5	Solve problems involving scale factors, using ratio and proportion
Pushing the Envelope			
2005 Mathematics			
Content and Achievement Standards			

North Dakota Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Physics and Math (pgs. 43-63)	ND	MA.8.8.5.2	Use variables, expressions and equations to represent problem situations
Pushing the Envelope			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grades 9-10			
Activity/Lesson	**State**	**Standards**	
Chemistry (pgs. 25-41)	ND	MA.9-10.9-10.4.2	Describe the effects of scalar change on the area and volume of a figure; e.g., the effect of doubling one or more edges of a solid on its surface area and volume
Physics and Math (pgs. 43-63)	ND	MA.9-10.9-10.3.3	Identify the variable, sample, and population in a well-designed study; e.g., in an exit poll for a tax increase, the variable is the outcome of the vote, the sample is the set of people surveyed, the population is the set of all voters
Physics and Math (pgs. 43-63)	ND	MA.9-10.9-10.5.2	Express relations and functions using a variety of representations; i.e., numeric, graphic, symbolic, and verbal
Physics and Math (pgs. 43-63)	ND	MA.9-10.9-10.5.3	Determine whether a relation is a function by examining various representations of the relation; e.g., table, graph, equation, set of ordered pairs
Physics and Math (pgs. 43-63)	ND	MA.9-10.9-10.5.15	Approximate and interpret rates of change from graphical and numerical data